

CLAIMS

What is claimed is:

1. A bulk bag discharger having at least one flow promotion device (FPD), comprising:

a center plate pivotably connected to a frame of the bulk bag discharger;
extension plates pivotably attached to each end of the center plate, each extension plate including a lever arm;

a connecting element connected between the lever arm on each of the extension plates and the frame; and

an actuator connected between the center plate and the frame, whereby upon activation of the actuator, the center plate is moved upwardly, and the extension plates are pivoted upwardly and inwardly by the connecting elements in order to press against the bag from at least three different directions.

2. The bulk bag discharger of claim 1, further comprising a second FPD located on an opposing side of the frame from the FPD, such that upon actuation of the actuators, the bag is pressed on from six directions to promote flow.

3. The bulk bag discharger of claim 1, wherein the connecting element is a link that includes first and second ends that can be extended apart from one another against a resilient biasing force.

4. The bulk bag discharger of claim 3, wherein a first end of the link is connected to a hollow link body, and a second end of the link comprises a slider that is moveable within the body and a rod end that is connected to the slider and extends out of the hollow link body.

5. The bulk bag discharger of claim 4, wherein a first ball joint is connected to the first end and a second ball joint is connected to the rod end at the second end of the link.

6. The bulk bag discharger of claim 1, wherein each extension plate includes two major surfaces for contacting the bag.

7. The bulk bag discharger of claim 6, wherein the major surfaces are set at an angle relative to one another to form a protruding area that is directed toward a bulk bag receiving space of the bulk bag discharger.

8. The bulk bag discharger of claim 1, wherein the center plate is connected to the frame along a pivot axis, and the extension plates are pivotably connected to the center plate by hinges that are set at an angle of about 30° to about 90° to the pivot axis.

9. A method of promoting flow of particulate or powdered material from a bulk bag as the bulk bag is discharged, comprising:

providing a flow promotion device (FPD) having a center plate pivotably connected to a frame of the bulk bag discharger, extension plates pivotably attached to each end of the center plate, each extension plate including a lever arm, and a connecting element connected between the lever arm on each of the extension plates and the frame;

activating an actuator located between the center plate and the frame; and

pressing inwardly on sides and corners of the bulk bag from at least three different directions at approximately the same time with the FPD utilizing the center plate and the extension plates in order to promote the flow of the material from the bulk bag.

10. The method of claim 9, further comprising:
providing a second FPD on an opposite side of the frame from the first FPD;
activating the actuator of the second FPD at the same time as the actuator of
the first FPD; and
pressing inwardly on the sides and corners of the bulk bag from at least three
additional different directions with the second FPD so that the bag is pressed
against from at least six different directions at approximately the same time to
promote the flow of material from the bulk bag.